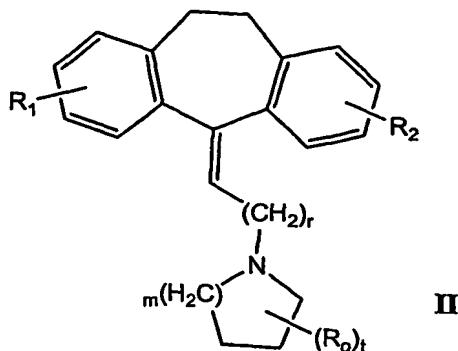


CLAIMS

What is claimed is:

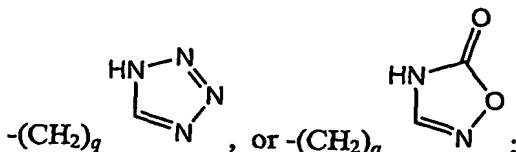
1. A method of treating a subject for a sleep disorder, comprising administering to a subject in need of treatment for a sleeping disorder an effective amount of a compound
5 represented by structural formula II;



wherein

10 R^1 and R^2 independently are -H, halogen, hydroxy, -CN, -NO₂, C₁₋₆-alkyl, halogenated C₁₋₆-alkyl, C₁₋₆-alkoxy, halogenated C₁₋₆-alkoxy, -NR²¹R²², -(SO₂)NR²¹R²², -NR²¹(SO₂)NR²², -(CO)NR²¹R²², -NR²¹(CO)R²², -(CO)R²², or -(CO₂)R²²,
 R^{21} and R^{22} independently are -H or C₁₋₆-alkyl;

15 R_o is C₁₋₆-alkyl, halogenated C₁₋₆-alkyl, C₁₋₆-alkoxy, halogenated C₁₋₆-alkoxy, phenyl, phenyl substituted with halogen, hydroxy, nitro or cyano, -(CH₂)_qCOR^P, -(CH₂)_qCONHSO₂Aryl, -(CH₂)_qCONHSO₂Heteroaryl, -(CH₂)_qCONHS(O)₂-Alkyl, -(CH₂)_qOH, -(CH₂)_qSO₂R^P, -(CH₂)_qS(O)₂NHCO-alkyl, -(CH₂)_qS(O)₂NHCO-aryl, -(CH₂)_qS(O)NHCO-alkyl, -(CH₂)_qS(O)NHCO-aryl, -(CH₂)_qP(O)(OH)₂, -(CH₂)_qP(O)OH,



wherein q is 0, 1 or 2;

R^P is H, OH or C₁₋₈ alkyl,

20 r is 1, 2, 3 or 4;

m is 1 or 2, and

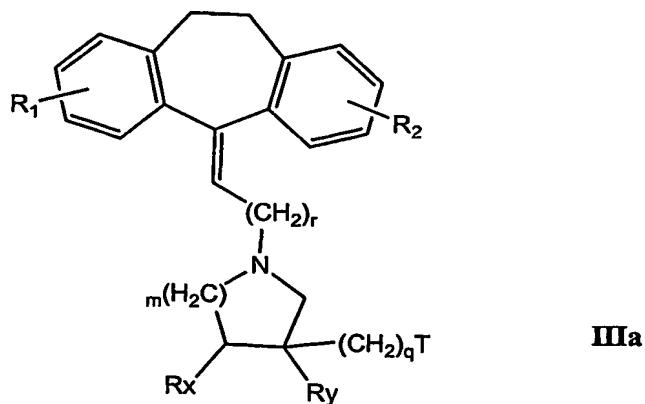
t is 1, 2, or 3; or a pharmaceutically acceptable salt, solvate, or hydrate thereof.

2. The method of Claim 1 wherein the subject is a human.

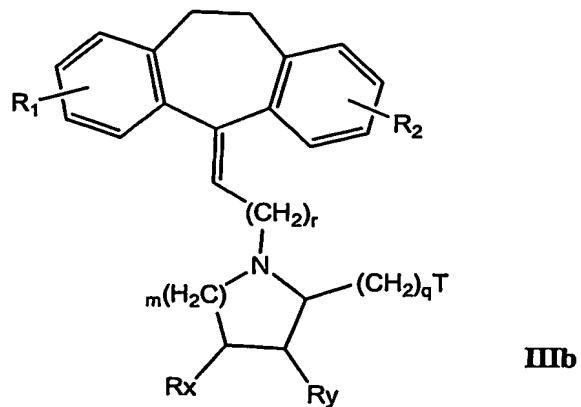
3. The method of Claim 1, wherein the subject is treated for a circadian rhythm adjustment disorder.
4. The method of Claim 1, wherein the subject is treated for a sleep disorder selected from
5 sleep apnea, somnambulism, night terrors, restless leg syndrome, sleep onset insomnia, and sleep maintenance insomnia.
5. The method of Claim 4 wherein the subject is treated for sleep onset insomnia or sleep maintenance insomnia.

10

6. A method of treating a subject for a sleep disorder, comprising administering to a subject in need of treatment for a sleeping disorder an effective amount of a compound represented by structural formula IIIa or IIIb:



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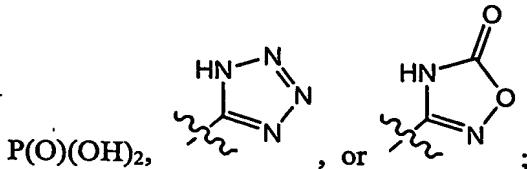
wherein

R¹ and R² independently are -H, halogen, hydroxy, -CN, -NO₂, C₁₋₆-alkyl, halogenated C₁₋₆-alkyl, C₁₋₆-alkoxy, halogenated C₁₋₆-alkoxy, -NR²¹R²², -(SO₂)NR²¹R²², -NR²¹(SO₂)NR²²,

$-(CO)NR^{21}R^{22}$, $-NR^{21}(CO)R^{22}$, $-(CO)R^{22}$, or $-(CO_2)R^{22}$, and R^{21} and R^{22} independently are -H or C₁₋₆-alkyl;

R_x and R_y are, independently, hydrogen, C₁₋₆-alkyl, halogenated C₁₋₆-alkyl, C₁₋₆-alkoxy, halogenated C₁₋₆-alkoxy, or, taken together, R_x and R_y form a bond;

5 T is COOH, COOR^a, CONHSO₂Aryl, CONHSO₂Heteroaryl, CONHS(O)₂Alkyl, SO₃H, S(O)₂NHCOAlkyl, S(O)₂NHCOAryl, S(O)NHCOAlkyl, (O)NHCO-Aryl,



R^a is C_{1-C₆} alkyl;

q is 0, 1 or 2;

10 r is 1, 2, 3 or 4; and

m is 1 or 2; or a pharmaceutically acceptable salt, solvate, or hydrate thereof.

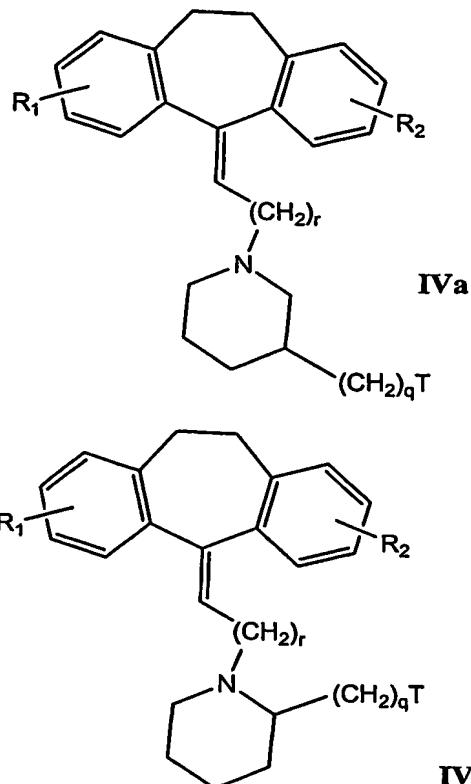
7. The method of Claim 6 wherein the subject is a human.

15 8. The method of Claim 6, wherein the subject is treated for a circadian rhythm adjustment disorder.

9. The method of Claim 6, wherein the subject is treated for a sleep disorder selected from sleep apnea, somnambulism, night terrors, restless leg syndrome, sleep onset insomnia, 20 and sleep maintenance insomnia.

10. The method of Claim 9 wherein the subject is treated for sleep onset insomnia or sleep maintenance insomnia.

25 11. A method of treating a subject for a sleep disorder, comprising administering to a subject in need of treatment for a sleeping disorder an effective amount of a compound represented by structural formula IVa or IVb:

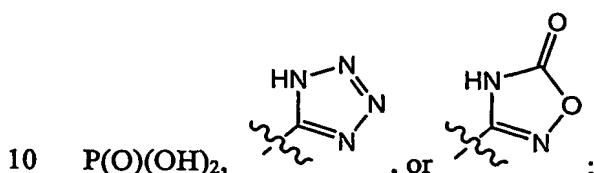


wherein

R^1 and R^2 independently are -H, halogen, hydroxy, -CN, -NO₂, C₁₋₆-alkyl, halogenated

5 C₁₋₆-alkyl, C₁₋₆-alkoxy, halogenated C₁₋₆-alkoxy, -NR²¹R²², -(SO₂)NR²¹R²², -NR²¹(SO₂)NR²², -(CO)NR²¹R²², -NR²¹(CO)R²², -(CO)R²², or -(CO₂)R²², and R²¹ and R²² independently are -H or C₁₋₆-alkyl;

T is COOH, COOR^a, CONHSO₂Aryl, CONHSO₂Heteroaryl, CONHS(O)₂Alkyl, SO₃H, S(O)₂NHCOAlkyl, S(O)₂NHCOAryl, S(O)NHCOAlkyl, S(O)NHCO-Aryl,



R^a is C₁-C₆ alkyl;

q is 0, 1 or 2; and

r is 1, 2, 3 or 4; or a pharmaceutically acceptable salt, solvate, or hydrate thereof.

15 12. The method of Claim 11 wherein the subject is a human.

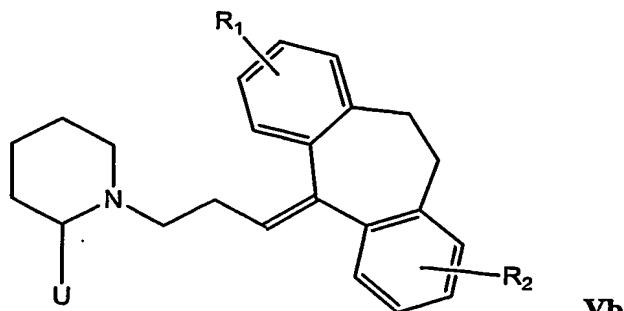
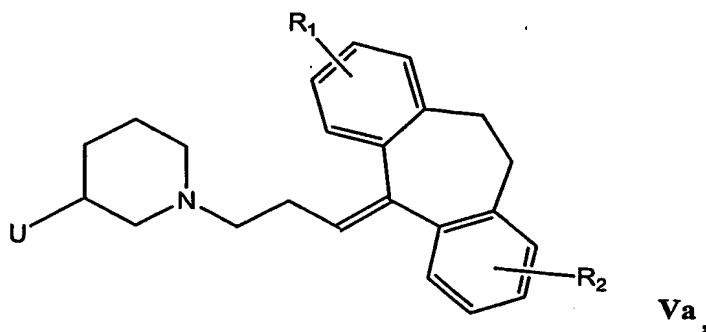
13. The method of Claim 11, wherein the subject is treated for a circadian rhythm adjustment disorder.

14. The method of Claim 11, wherein the subject is treated for a sleep disorder selected from
5 sleep apnea, somnambulism, night terrors, restless leg syndrome, sleep onset insomnia, and sleep maintenance insomnia.

15. The method of Claim 14 wherein the subject is treated for sleep onset insomnia or sleep maintenance insomnia.

10

16. A method of treating a subject for a sleep disorder, comprising administering to a subject in need of treatment for a sleeping disorder an effective amount of a compound represented by structural formula **Va** or **Vb**:

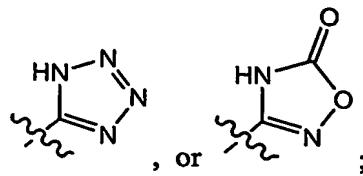


15

wherein

17 R^1 and R^2 independently are -H, halogen, hydroxy, -CN, -NO₂, or C₁₋₆-alkyl, halogenated C₁₋₆-alkyl, C₁₋₆-alkoxy, halogenated C₁₋₆-alkoxy, -NR²¹R²², -(SO₂)NR²¹R²², -NR²¹(SO₂)NR²², -(CO)NR²¹R²², -NR²¹(CO)R²², -(CO)R²², or -(CO₂)R²², R²¹ and R²² independently are -H or C₁₋₆-alkyl;

18 R^a is C₁-C₆ alkyl; and



U is COOH, COOR^a, CONHSO₂Aryl,
or a pharmaceutically acceptable salt, solvate, or hydrate thereof.

17. The method of Claim 16 wherein the subject is a human.

5

18. The method of Claim 16, wherein the subject is treated for a circadian rhythm adjustment disorder.

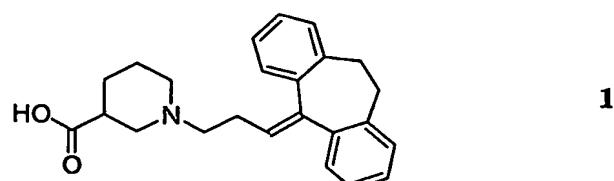
19. The method of Claim 16, wherein the subject is treated for a sleep disorder selected from
10 sleep apnea, somnambulism, night terrors, restless leg syndrome, sleep onset insomnia, and sleep maintenance insomnia.

20. The method of Claim 19 wherein the subject is treated for sleep onset insomnia or sleep
15 maintenance insomnia.

21. The method of Claim 1, 6, 11, or 16 wherein R¹ and R² independently are -H, halogen, hydroxy, C₁₋₆-alkyl or C₁₋₆-alkoxy.

22. The method of Claim 1, 6, 11, or 16, wherein R¹ and R² independently are -H or
20 halogen.

23. A method of treating a subject for insomnia, comprising administering to a subject in
need of treatment for insomnia an effective amount of a compound 1:



25 or a pharmaceutically acceptable salt, solvate, or hydrate thereof.

24. The method of Claim 23, wherein the compound is the R isomer of compound 1.

25. The method of Claim 23, wherein the compound is the *S* isomer of compound 1.